

REMARKS

This Amendment responds to the Office Action dated June 23, 2005 in which the Examiner required a new title, objected to the drawings, rejected claims 3, 9 and 10 under 35 U.S.C. §112 second paragraph, rejected claim 12 under 35 U.S.C. §102(b), rejected claim 1-2, 4-6 and 11 under 35 U.S.C. §103 and stated that claims 3 and 7-10 would be allowable.

Applicants respectfully point out to the Examiner that although priority has been acknowledged, Applicants believe that box 12a₃ should be indicated rather than box 12a₁. Applicants respectfully request the Examiner provide a new acknowledgement of the priority documents.

As indicated above, a new title has been provided which clearly indicates the invention to which the claims are directed. Therefore, Applicants respectfully request the Examiner approves the new title.

The drawings were objected to under 37 C.F.R. §1.83. Applicants respectfully traverse. In particular, an optical semiconductor element as recited in claim 1 is found in the figures as reference numeral 40 (see page 10 line 1 and line 17). Additionally, Applicants respectfully bring the Examiner's attention to Figure 20 and reference numerals 10A, 10B which show the first and second members as discussed on page 45 of the specification lines 11-18. Also, Applicants respectfully bring the Examiner's attention to Figures 3A and 3B which shows the cap 13 having hole 17 for causing the laser light to pass therethrough (see page 11, lines 15-17) as well as lens insertion hole 14 (page 11, lines 6-7). Additionally, Applicants respectfully bring the Examiner's attention to Figure 23. Applicants respectfully submit that Figure 23 shows the optical semiconductor element (40) and integration

driving circuit 100 which transmits and receives different signals to and from the optical semiconductor element as claimed in claim 12. Therefore, Applicants respectfully request the Examiner withdraws the objection to the drawings.

As indicated above, claims 3 and 9 have been amended in order to more particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Applicants respectfully submit that the amendment does not narrow the literal scope of the claims. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 3, 9 and 10 under 35 U.S.C. §112 second paragraph.

As indicated above a typographical error has been corrected in claim 12. The amendment is unrelated to a statutory requirement for patentability and does not narrow the literal scope of the claim.

Claim 1 claims an optical semiconductor package for packaging therein an optical semiconductor element, comprising a stem, a dielectric and a pair of high frequency signal pins. The stem has a hole. The dielectric is sealed into the hole of the stem, and has a pair of pin insertion holes. The pair of high frequency signal pins penetrate through and fit into the pair of pin insertion holes of the dielectric, and constitute differential lines electrically connected to the optical semiconductor element.

Through the structure of the claimed invention a) having a pair of high frequency signal pins penetrate through a pair of pin insertion holes formed in a (single) dielectric in a (one) hole and b) the pair of high frequency signal pins constitute differential lines as claimed in claim 1, the claimed invention provides an optical semiconductor package having superior high frequency transmission

characteristics and a high-rate of operation. The prior art does not show, teach or suggest the invention as claimed in claim 1.

Claim 12 claims an optical semiconductor package that contains an optical semiconductor element and an integrated circuit which transmits and receives differential signals to and from the optical semiconductor element. The optical semiconductor package comprises a dielectric and a pair of signal pins. The dielectric is sealed into and fixed to a wall surface of the package, and has a pair of pin insertion holes. The pair of signal pins penetrate through and fit into the pair of pin insertion holes, and constitute differential lines wherein differential signals are transmitted and received to and from the integrated circuit through the pair of signal pins.

Through the structure of the claimed invention having a dielectric having a pair of pin insertion holes through which a pair of signal pins penetrate and which constitute differential lines as claimed in claim 12, the claimed invention provides an optical semiconductor package with superior high frequency transmission characteristics and a high-rate operation. The prior art does not show, teach or suggest the invention as claimed in claim 12.

Claim 12 was rejected under 35 U.S.C. §102(b) as being anticipated by *Oikawa* (U.S. Patent No. 6,074,102).

Applicants respectfully traverse the Examiner's rejection of the claim under 35 U.S.C. §102(b). The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claim and allows the claim to issue.

Oikawa appears to disclose an optical device having a package structure fit for characteristic impedance matching and grounding enhancement in an optical receiver. (col. 1, lines 8-10) The base member 30 has through holes 30C and 30D extending from the first surface 30A to the second surface 30B. The signal terminal 28 is inserted through the hole 30C and fixedly held in coaxial relationship with the hole 30C by a glass paste GP filling the hole 30C. Similarly, a bias or low-speed signal terminal 32 is inserted through the hole 30D and fixedly held in coaxial relationship with the hole 30D by a glass paste GP filling the hole 30D. (col. 3, lines 27-34)

Thus, *Oikawa* merely discloses a signal terminal 28 inserted through hole 30C and a low-speed signal terminal 32 inserted through hole 30D. Nothing in *Oikawa* shows, teaches or suggests a) a pair of pin insertion holes formed in a dielectric, b) a pair of signal pins penetrating through and fitting the pair of pin insertion holes and c) the pair of signal pins constitute differential lines as claimed in claim 12. Rather, *Oikawa* teaches away from the claimed invention and discloses two separate dielectrics GP each containing a single signal terminal 28 or 32.

Since nothing in *Oikawa* shows, teaches or suggests a) a dielectric having a pair of pin insertion holes and b) a pair of signal pins that penetrate through and into the pair of pin insertion holes and constitute differential lines as claimed in claim 12, Applicants respectfully request the Examiner withdraws the rejection to claim 12 under 35 U.S.C. §102(b).

Claims 1, 2, 4-6 and 11 were rejected under 45 U.S.C. §103 as being unpatentable over *Oikawa*.

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, *Oikawa* merely discloses a hole 30C having a signal terminal 28 and a hole 30D having a low-speed signal terminal 32. Nothing in *Oikawa* shows, teaches or suggests a) a (one) hole having a dielectric therein with a pair of pin insertion holes and b) a pair of high frequency signal pins constitute differential lines as claimed in claim 1. Rather, *Oikawa* clearly teaches away from the claimed invention and discloses two holes 30C, 30D each containing glass paste GP and each containing a single signal terminal 28 or 32.

Since nothing in *Oikawa* shows, teaches or suggests a) a (one) hole having a dielectric with a pair of pin insertion holes and b) a pair of high frequency signal pins constitute differential lines as claimed in claim 1, Applicants respectfully request the Examiner withdraws the rejection to claim 1 under 35 U.S.C. §103.

Claims 2, 4-6 and 11 depend from claim 1 and recites additional features. Applicants respectfully submit that claims 2, 4-6 and 11 would not have been obvious within the meaning of 35 U.S.C. §103 over *Oikawa* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 2, 4-6 and 11 under 35 U.S.C. §103.

Since objected to claims 7 and 8 depend from allowable claims, Applicants respectfully request the Examiner withdraws the objection thereto.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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